REPORT OF A SOCIOLOGICAL AND CLINICAL INVESTIGATION OF ORAL HEALTH AMONG 6 TO 12 YEAR-OLDS IN CONGHUA COUNTY, GUANGDONG PROVINCE, P.R.C., 1988

A joint study conducted

by

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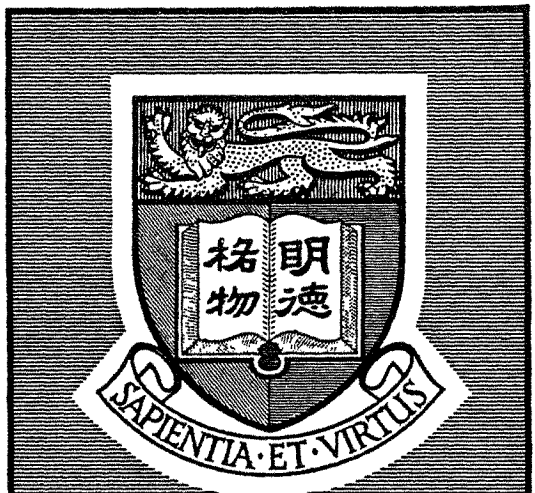

ABSTRACT

A survey of the oral health status and related sociological factors of 745 urban, periurban, and rural school children aged 6, 9, and 12 years in Conghua County, Guangdong Province, P.R.C., was conducted jointly by the World Health Organization Collaborating Centre for Primary Health Care, Conghua, and the Department of Periodontology and Public Health, University of Hong Kong. The purpose of the survey was to gather baseline data suitable for planning the development of an oral health care delivery system for school children in Conghua County.

The majority of children had visible plaque accumulation on anterior and posterior teeth (Plaque Index score 2). More than 90% of 12 year-olds had calculus deposits. According to CPITN criteria, urban children needed scaling in 3.4 sextants on average; for rural children the need was greater. Forty-five and 33% respectively of urban and rural 6 year-olds had 9-20 decayed, missing, or filled primary teeth. The respective dmft indices for the urban, periurban, and rural children in this age-group were 7.8, 6.6, and 5.9. The proportions of 12 year-olds who were clinically caries free in urban, periurban, and rural areas were 60%, 80%, and 87% and the respective DMFT indices were 1.1, 0.9, and 0.4. The children were in urgent need of preventive and restorative care for primary teeth. In relation to permanent teeth, urban 12 year-olds needed a mean of 0.8 1-surface fillings and a mean of 0.4 extractions per person, while the rural children needed half of these respective amounts.

Tetracycline staining was evident in 59%, 56%, and 16% of urban, periurban, and rural 12 year-olds respectively. Mild or very mild signs of dental fluorosis were observed in 2% of the children.

Recommendations were made concerning needs for water fluoridation, school-based toothbrushing, and the development of a dental service committed to primary prevention but with provision for referral of children for operative care within the primary health care network.

摘要

广东省从化县世界卫生组织初级卫生保健合作中心与香港大学齿骨膜病学及公共卫生学系，於1988年11月在中国广东省从化县联合开展了从化中，小学生口腔卫生状况及有关的社会学因素的调查。 调查对象共745人，分别来自该县城镇，附城和农村，年龄为6岁，9岁和12岁。 调查之目的是为计划发展从化县中，小学生口腔卫生保健网而收集基线资料。

受检的大多数儿童的前牙和后牙均有牙菌斑积聚（菌斑指数2）；12岁组的儿童90%以上均有牙结石沉积。 根据"社区牙周治疗需求指数"诊断标准，城镇儿童平均每人有3.4个牙段需作洁牙治疗，而农村儿童所需程度更高。 城镇45%， 农村33% 的6岁儿童有9-20个牙齿属龋齿，缺失或充填，其乳牙的龋齿，缺失，充填指数在城镇，附城和农村分别为7.8；6.6；5.9。 12岁组儿童临床无龋齿比例分别是：城镇60%， 附城80%， 农村87%；恒牙的龋齿，缺失，充填指数分别是：城镇1.1， 附城0.9， 农村0.4.

由此可见，该地区儿童乳牙预防和修复性保健十分急需。 至於恒牙，12岁儿童在城镇每人平均有0.8个牙齿需作单面充填，0.4个牙齿需拔除，而农村这两个数值仅为城镇的一半。

12岁儿童的牙齿患四环素着色的比例是：城镇59%， 附城56%， 农村16%。 受检儿童中，2%患有轻度或非常轻度的氟斑牙。

根据调查结果分析，提出以下建议：

1. 自来水加氟；
2. 以学校为基础推广正确刷牙方法；
3. 发展牙病初级预防服务并通过三级卫生保健网为儿童提供各种有关的治疗保健。

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INTRODUCTION

In 1987 and 1988, student groups from the university of Hong Kong visited the Conghua WHO Collaborating Centre for Primary Health Care and conducted projects to evaluate the role of the dental services component of the health care system (University of Hong Kong 1987; 1988) and to study the concepts embodied in the Primary Health Care Approach (World Health Organization, 1982 and 1983; Sheiham, 1982; Fu, undated). These initiatives were followed up by the establishment of a program which aimed to advance co-operation between the Conghua WHO Collaborating Centre for Primary Health Care and members of Department of Periodontology and Public Health, University of Hong Kong.

GOALS

The goals of this program were:

1. To conduct a survey to establish baseline levels of dental fluorosis, tetracycline staining, periodontal disease, and dental caries and related treatment needs among primary school children in Conghua using WHO methods and criteria.

2. To conduct a survey to investigate the oral health related knowledge, attitudes, and behaviour of the population in Conghua.

3. Following an analysis of the data collected:
   (a) A Health Education Program, aimed at promoting an awarenees of the common oral diseases and their causes, prevention, and treatment will be developed, and
   (b) a program for improving the oral hygiene status of the school children in Conghua will be developed.

4. Further disscussions will be held to plan for:
   (a) The implementation of the health education and oral hygiene programs,
   (b) The development of a system for the recognition of disease and its referral for appropriate treatment within the context of the primary health care approach, and
   (c) the integration of the oral health program and the general health program within the context of Health for All Year 2000.

This document reports on the planning and implementation of the survey, as proposed in the first two goals above, together with the results, discussion, and recommendations arising from the analysis of the data.

PLANNING

A preliminary visit to Conghua was made in August 1988 for the purpose of planning the implementation of the survey as described in the first goal above. This was carried out in co-operation with Director Kuang, Dr. Fu, and Mr. Wu of the WHO Primary Health Care Centre. The method of sampling was discussed and schools at which the survey would be conducted were selected. Staff members from various health institutes were recruited and given training in recording the survey findings and in conducting interviews. Questionnaires were drafted for obtaining dental health related data from both school children and their teachers. These draft questionnaires were then tested.

On returning to Hong Kong, the questionnaires were amended and retested through interviews with child patients attending the Prince Philip Dental Hospital. The finalised questionnaires were translated into English for reference. A time, convenient to all parties, was negotiated for the survey which was expected to extend over five working days. Arrangements for working schedules, accommodation, and transport were completed.

CO-ORDINATION OF PLANNING

The administrative responsibility for developing and implementing the planning, and of attending to the communications between Conghua and Hong Kong was handled by the Project Co-ordinator. This included the organising of meetings, telephoning, letter correspondence, and making site visits.

FINANCIAL SUPPORT

This program, including that of another project conducted by dental students from the University of Hong Kong in March 1989, was funded through the generosity of the Rotary Club of Hong Kong Northwest.

MATERIAL AND METHODS

THE SAMPLE

The survey was conducted in urban, periurban, and rural areas of Conghua County. Primary and secondary schools were selected in each area and within the schools, children aged 6, 9, and 12 years were selected for examination and interview. A target sample of 800 overall, comprising 200 children in both age groups 6 and 9 years, and 400 aged 12, was set.

The policy was that the area subsamples would be of equal size, but priority was given to fulfilling the sample quota in the urban and periurban areas. In relation to each age group, the school principals nominated a sufficient number of classes of children for the sample quotas to be achieved.

SOCIOLOGICAL INVESTIGATION

Sociological data was obtained from the children through the administration of a standardised interview as set out in a structured questionnaire. This was designed to obtain data related to:

1. Demographic characteristics
2. Oral hygiene practices
3. Diet
4. Oral health related knowledge and conditions
5. Dental service utilization

In addition, the school teachers were also surveyed. They completed questionnaires which were designed to obtain data related to:

1. Demographic characteristics
2. Oral hygiene practices
3. Oral health related knowledge
4. Dental service utilization
5. Teachers' opinions of the oral health conditions of Conghua school children

CLINICAL INVESTIGATION

The children were clinically examined in the supine position in an outdoors area. Natural daylight was used for intraoral illumination. Data was obtained on:

1. Tetracycline staining
2. Dental fluorosis
3. Dental plaque level
4. Dental caries status and treatment needs
5. Periodontal status and treatment needs

Tetracycline stains on permanent teeth were recorded as present or absent. Dental fluorosis was assessed acording to Dean's criteria (WHO, 1988). Dental caries status and treatment needs were determined according to the criteria developed by the World Health Organization (WHO, 1988). Treatment needs for primary teeth were determined by the criteria put forward by Evans and others (1987). The oral hygiene status was assessed according the Plaque Index (Silness and Loe, 1964), whereas periodontal status and treatment needs were determined by the Community Periodontal Index of Treatment Needs (CPITN) (WHO, 1988). The plaque level was assessed in both anterior (buccal surface of the right upper control incisor) and posterior (buccal surface of the left lower first molar) locations of the dentition.

SURVEY ARRANGEMENTS

The survey commenced with the plaque, periodontal and tetracycline stain assessments (K.L.Lee and S.S.C. Sou) at which stage the survey forms were issued to the children. This was followed by the assessments for caries and fluorosis (E.C.M. Lo and R.W. Evans). Finally the children were interviewed under the supervision of K.K.Y. Mak, and on completion they were given toothbrushes and toothpaste in appreciation of their co-operativeness. Staff members of the WHO Collaborating Centre for Primary Health Care at Conghua were given experience in conducting the dental examinations and interviews.

RESULTS

THE SAMPLE

A total of 745 children aged 6, 9, and 12 years were clinically examined and interviewed (Table 1). These children were drawn from one primary and one secondary school in the urban area, two primary and two secondary schools in the periurban area, and from one primary and one secondary school in the hill country rural area of Conghua County (Table 2).

THE QUESTIONNAIRE

ORAL HYGIENE PRACTICE

More than 90% of the 12 year-olds claimed to have brushed their teeth everyday, and a high proportion of children in the 6 and 9 year age groups made a similar claim (Table 3). The proportion of children claiming to brush their teeth daily tended to decrease in moving from urban to periurban to rural areas.

Most children responded that they brushed their teeth only once per day (Table 4), and usually this was done in the mornings (Table 5) with the aid of toothpaste (Table 6). According to the children, a parent was responsible in about 70% of cases for developing oral hygiene practices (Table 7); teachers played almost no part in this. Mouth rinsing after eating was practised by about half of the children in the periurban and rural areas and by about 70% in the urban area (Table 8).

BETWEEN-MEAL SNACKING

Between-meal snacking was not common in any area (Table 9). About one quarter of the children said they had one between-meal snack daily and few responded that they had more than this.

ORAL HEALTH RELATED KNOWLEDGE AND CONDITIONS

A higher proportion of 9 year-olds perceived that they had experienced dental caries compared with the 6 and 12 year-olds (Table 10). This awareness was higher among the urban children compared with children from the other areas. More children from the urban compared with the other areas reported that they would visit a dentist in response to caries symptoms. And, compared with other children, fewer urban children reported that they would ignore such a problem (Table 11). Self medication for caries was low in all areas as was the use of Chinese herbal teas. In the urban and periurban areas, about 50% of the children could relate the etiological factors of sugar with dental caries, whereas in the rural area, about 80% of the children did not know the cause of dental caries (Table 12). The role of oral hygiene in caries causation was little appreciated. Finally, in all areas, little credence was given to the concept that a tooth worm caused caries.

Gum bleeding was reported by a high proportion of the 9 and 12 year-olds in all areas (Table 13), and their response was to have

a mouth rinse (Table 14). The cause of gum bleeding was not known to most of the children (Table 15).

DENTAL SERVICE UTILIZATION

About half of the 9 and 12 year-olds in the urban and periurban areas had attended a dentist compared with a quarter in the rural area (Table 16). The timing of the last attendance for most of such children was within the previous 24 months (Table 17). Most 9 year-olds had sought treatment within the previous 6 months compared with the other year groups. The combined problems of toothache, tooth decay, and tooth extraction accounted for the need to seek treatment. Visits related to periodontal conditions were almost nil, and those for checkups were few in all regions (Table 18). In the urban and periurban areas, the bulk of the dental care received by the children was given by stomatologists. Treatment provided in the urban area by the recently available sector of private dentists accounted for a small portion of the total care given (Table 19). In contrast, little care was received from stomatologists in the rural areas where the rural doctor was identified as the main provider. In all areas, it was almost exclusively the case that parents arranged for the dental treatment (Table 20); this responsibility did not fall upon teachers.

THE CLINICAL EXAMINATION

ORAL HYGIENE STATUS

The oral hygiene status of the older children was better than that of the younger children in relation to both anterior and posterior teeth (Tables 21 and 22). More children had plaque scores of 2 (visible plaque) than other scores, although few had score 3 (abundant plaque). Anterior teeth were cleaner than posterior teeth. There was a trend of decreasing oral hygiene status in moving from urban to rural areas.

PERIODONTAL STATUS AND TREATMENT NEEDS

In all areas, periodontal status deteriorated with increasing age. By age 9, 60-80% of children had calculus deposits (CPITN score 2) rising to more than 90% at age 12 (Table 23). There was little differentiation by area. The mean number of sextants per child by CPITN code also varied little between areas (Table 25). At age 12, the average findings were that more than half of the sextants exhibited calculus, one sextant bleed on probing in the absence of calculus, and one-and-a-half sextants were healthy. Whereas there was a need for scaling for up to 20% of the 6 year-olds, more than 90% needed scaling at age 12; only 1% of children by CPITN criteria were not in need of any treatment type. The need for scaling increased from a mean of 0.1 sextants per child at age 6, to 2.2 and 3.4 sextants respectively for the 9 and 12 year-olds (Table 26). Rural 12 year-olds needed one more sextant of calculus removal compared with their urban counterparts.

DENTAL CARIES STATUS AND TREATMENT NEEDS

There was a small difference in caries levels between the urban and rural areas (Table 27). At age 6, 10%, 16%, and 20% of children were clinically caries free as regards their primary

teeth in urban, periurban, and rural areas respectively. Forty-five percent and 33% of urban and rural children respectively had 9-20 dmft. This regional variation was also reflected in the dmft index (Table 28). For the 6 year-olds, the dmft indices for the urban, periurban, and rural areas were 7.8, 6.6, and 5.9. The corresponding values for the 9 year-olds were 4.2, 3.9, and 3.7. The index value was almost exclusively determined by decayed teeth.

Regional variation in the caries experience of permanent teeth was also evident (Table 29). At age 9, the percentage of children clinically caries free in urban, periurban, and rural areas was 60%, 80%, and 87%, and for the 12 year-olds the respective proportions were 44%, 61%, and 73%. Whereas 38% of the urban 12 year-olds had two or more DMFT, the proportion of rural children so affected was 14%. The DMFT indices of the urban, periurban, and rural 9 year-olds were respectively 0.7, 0.3, and 0.2, while for the 12 year-olds they were 1.3, 0.9, and 0.4 (Table 30). As for the primary teeth, the DMFT index was derived almost exclusively from decayed teeth. A few children in the urban area only had restored teeth.

There was a pronounced need for caries treatment for primary teeth. About 50% of children needed restorative care, pulp care, and tooth extractions in both 6 and 9 year age-groups (Table 31). At age 6, the average child in the urban area needed 1.4 1-surface fillings, 1.4 2-surface fillings, 1.5 pulp treatments, and 1.1 extractions (Table 32). There were lesser needs for the 9 year-olds.

Between 10% and 20% of 9 and 12 year-olds needed specific preventive care for permanent teeth (Table 33). In addition, the greatest need for both age groups was for 1-surface fillings. The need for more advanced restorative care and pulp treatment was rare. At age 12, 22% of urban children and 11% of rural children needed permanent teeth extracted. Nine year-olds needed specific prevention applied to between one and two teeth per person on average (Table 34). This need was much reduced at age 12. Urban 12 year-olds needed a mean of 0.8 1-surface fillings and a mean of 0.4 extractions per person, while the rural children needed half these respective amounts.

DENTAL FLUOROSIS AND TETRACYCLINE STAIN

Among 12 year-olds, almost 90% were classified as being not affected by dental fluorosis, and 10% were found to have signs of questionable fluorosis (Table 35). One percent were classified as having signs of very mild fluorosis, and another 1% as having mild dental fluorosis. There was no difference by area.

A marked area difference was observed in relation to the prevalence of tetracycline stains (Table 36). For 9 year-olds, the proportions of children in urban, periurban, and rural areas were 27%, 12%, and 5% respectively, and for the 12 year-olds the percentages were 59, 56, and 16. Besides this area difference, an age difference was very marked. The prevalences of staining among urban 12, 9, and 6 year-olds were 59%, 27%, and 2%

respectively. A similar pattern was observed in the periurban area where the prevalences were 56%, 12%, and 0% for the 12, 9, and 6 year-olds respectively.

QUESTIONNAIRE SURVEY OF TEACHERS.

Questionnaires were completed by 231 teachers. They were aged from less than 19 to greater than 50 years (Table 37). The majority of male teachers were aged 20-29 years whereas female teachers were distributed more evenly throughout the age groups. On the whole, the teachers felt that the major oral health problem of the children was dental caries (Table 38). None mentioned periodontal problems. In the main, it was felt that inadequate oral hygiene was the cause of the dental problems of the children (Table 39).

ORAL HYGIENE PRACTICES

In addition to daily toothbrushing, 36% of teachers used a toothpick but only 3% used floss (Table 40). Mouthrinsing was practised by half of the teachers.

ORAL HEALTH-RELATED KNOWLEDGE

Only 25% of teachers were aware of the significance of fluoride in relation to dental health (Table 41). The majority of teachers thought that the cause of caries was either bacteria related or associated with poor oral hygiene (Table 42).

Regarding the aetiology of periodontal disease, 22% reported a relation to oral hygiene and bacteria (Table 43). Another 11% cited calculus as a cause, and 13% offered an explanation derived from Chinese traditional medical beliefs. The remaining half of the teachers admitted that they did not know the cause of periodontal disease.

In order to prepare themselves for taking up the duties of teaching their pupils about oral health, two thirds of the teachers felt that they would need to attend a short course, and some felt a longer course would be necessary (Table 44). A great variety of teaching approaches were considered appropriate for child learning (Table 45).

DENTAL SERVICE UTILIZATION

Forty percent of teachers had never received dental care (Table 46). Among those who had received care, a regular visiting pattern was not evident. When care had been sought, the majority of teachers needed help for such common problems as toothache and extraction, or for restorative and prosthetic reasons (Table 47). Among those not ever having had dental treatment, the most common reason given for this state of affairs was, that there was no need since there were no problems (Table 48).

Table 1. Age and Sex distribution of survey subjects.

Age	Male	Female	Total
6	126	110	236
9	82	77	159
12	198	152	350
Total	406	339	745

Table 2. Distribution of survey subjects by region.

Age	Urban	Periurban	Rural	Total
6	91	100	45	236
9	60	59	40	159
12	152	142	56	350
Total	303	301	141	745

Table 3. Toothbrushing habit; percentage of children who claimed to brush their teeth everyday.

	Age 6	Age 9	Age 12
Urban	89	97	100
Periurban	72	80	95
Rural	58	80	93
Combined	76	86	97

Table 4. Toothbrushing frequency; percentage of children by daily brushing frequency.

	Daily Frequency	Age 6	Age 9	Age 12
Urban	Once	67	59	54
	Twice	25	29	37
	>Twice	8	12	9
Periurban	Once	78	87	67
	Twice	18	11	30
	>Twice	4	2	3
Rural	Once	93	86	89
	Twice	7	11	9
	>Twice	0	3	2
Combined	Once	75	76	65
	Twice	20	18	30
	>Twice	5	6	5

Table 5. Toothbrushing timetable; percentage of children by time of day for toothbrushing.

		Age 6	Age 9	Age 12
Urban	Morning	68	69	56
	Evening	4	0	1
	After meals	1	0	0
	Morning and evening	27	31	43
Periurban	Morning	77	88	70
	Evening	1	2	0
	After meals	0	0	1
	Morning and evening	22	10	29
Rural	Morning	93	97	89
	Evening	0	0	2
	After meals	0	0	0
	Morning and evening	7	3	9
Combined	Morning	75	83	67
	Evening	2	1	1
	After meals	1	0	0
	Morning and evening	22	16	32

Table 6. Use of toothpaste; percentage of children using toothpaste

	Age 6	Age9	Age 12
Urban	91	98	99
Periurban	88	91	99
Rural	75	94	98
Combined	88	95	99

Table 7. Development of toothbrushing know-how; percentage of children by person responsible for teaching method of oral hygiene

		Age 6	Age 9	Age 12
Urban	Parent	78	75	69
	Teacher	0	2	2
	Other	22	23	29
Periurban	Parent	79	61	70
	Teacher	1	0	1
	Other	20	39	29
Rural	Parent	82	78	77
	Teacher	0	0	0
	Other	18	22	23
Combined	Parent	79	71	71
	Teacher	1	1	1
	Other	21	28	28

Table 8. Rinsing after eating; percentage distribution of children

	Age 6	Age 9	Age 12
Urban	71	68	72
Periurban	53	48	54
Rural	18	63	48
Combined	53	59	61

Table 9. Frequency of between-meal snacking (including drinks) yesterday; percentage distribution of children

		Age 6	Age 9	Age 12
Urban	None	80	78	68
	Once	12	19	23
	Twice	4	2	7
	3 times	3	0	1
	>3 times	1	1	1
Periurban	None	75	81	63
	Once	16	9	27
	Twice	8	8	5
	3 times	1	0	4
	>3 times	0	2	1
Rural	None	85	75	66
	Once	13	8	29
	Twice	0	10	3
	3 times	2	5	2
	>3 times	0	2	0
Combined	None	79	79	66
	Once	14	12	25
	Twice	5	6	6
	3 times	2	1	2
	>3 times	0	2	1

Table 10. Self perception of dental caries status; percentage of children who perceived they had experienced dental caries

	Age 6	Age 9	Age 12
Urban	54	87	72
Periurban	58	76	54
Rural	56	60	52
Combined	56	76	61

Table 11. Reponse to dental caries symptoms; percentage distribution of children

		Age 6	Age 9	Age 12
Urban	Ignore it	49	31	25
	Drink cooling tea	2	0	1
	Visit dentist	36	44	50
	Take medicine	2	10	9
	Other	11	15	15
Periurban	Ignore it	58	55	31
	Drink cooling tea	2	7	4
	Visit dentist	19	16	43
	Take medicine	2	2	6
	Other	19	20	16
Rural	Ignore it	67	50	42
	Drink cooling tea	0	8	4
	Visit dentist	8	30	27
	Take medicine	0	4	8
	Other	25	8	19
Combined	Ignore it	56	44	30
	Drink cooling tea	2	4	2
	Visit dentist	23	30	45
	Take medicine	2	6	7
	Other	17	16	16

Table 12. Understanding of dental caries etiology; percentage distribution* of children by perceived aetiological factors

		Age 6	Age 9	Age 12
Urban	Sugar	26	47	55
	Inadequate oral hygiene	0	5	29
	Bacteria	0	0	3
	Tooth worm	1	0	3
	Other	1	2	6
	Don't know	66	50	36
Periurban	Sugar	24	12	49
	Inadequate oral hygiene	2	9	20
	Bacteria	0	0	1
	Tooth worm	3	0	3
	Other	0	2	3
	Don't know	72	81	42
Rural	Sugar	11	20	21
	Inadequate oral hygiene	2	0	4
	Bacteria	0	0	0
	Tooth worm	0	0	2
	Other	0	3	0
	Don't know	87	78	77
Combined	Sugar	23	27	47
	Inadequate oral hygiene	1	5	21
	Bacteria	0	0	1
	Tooth worm	2	0	3
	Other	1	2	4
	Don't know	73	69	45

* Does not add to 100 owing to multiple choices.

Table 13. Experience of gum bleeding; percentage distribution of children reporting a history of gum bleeding

	Age 6	Age 9	Age 12
Urban	30	73	74
Periurban	39	81	68
Rural	31	83	71
Combined	34	79	71

Table 14. Response to gum bleeding; percentage distribution of children

		Age 6	Age 9	Age 12
Urban	Ignore it	16	7	4
	Drink cooling tea	0	0	0
	Visit dentist	4	2	4
	Take Medicine	0	0	0
	Rinse	80	91	92
Periurban	Ignore it	8	4	5
	Drink cooling tea	0	0	0
	Visit dentist	3	2	2
	Take Medicine	0	0	0
	Rinse	89	94	93
Rural	Ignore it	21	0	0
	Drink cooling tea	0	0	0
	Visit dentist	0	6	0
	Taking medicine	0	0	0
	Rinse	79	94	100
Combined	Ignore it	13	4	4
	Drink cooling tea	0	0	0
	Visit dentist	3	3	2
	Taking Medicine	0	0	0
	Rinse	84	93	94

Table 15. Understanding of gum bleeding aetiology; percentage distribution* of children by perceived etiological factors

		Age 6	Age 9	Age 12
Urban	Poor oral hygiene	2	0	6
	Calculus	0	0	1
	Bacteria	0	0	0
	Hot air	0	0	1
	Other	11	25	33
	Don't know	77	73	61
Periurban	Poor oral hygiene	2	0	1
	Calculus	0	0	0
	Bacteria	0	0	0
	Hot air	0	0	1
	Other	19	31	37
	Don't know	79	70	62
Rural	Poor oral hygiene	0	0	0
	Calculus	0	0	0
	Bacteria	0	0	0
	Hot air	0	0	2
	Other	16	23	23
	Don't know	84	78	75
Combined	Poor oral hygiene	2	0	3
	Calculus	0	0	0
	Bacteria	0	0	0
	Hot air	0	0	1
	Other	15	26	33
	Don't know	79	73	63

* Does not add to 100 owing to multiple choices.

Table 16. Dental service utilization; percentage of children who have attended a dentist

	Age 6	Age 9	Age 12
Urban	43	61	55
Periurban	24	34	51
Rural	7	30	18
Combined	28	43	48

Table 17. Last attendance for dental care; percentage of children by time since last dental visit

		Age 6	Age 9	Age 12
Urban	0-6 months	34	44	25
	7-12 months	13	6	3
	13-24 months	16	33	26
	25-36 months	0	6	11
	> 36 months	3	0	29
	Don't know	34	11	7
Periurban	0-6 months	57	68	11
	7-12 months	14	0	6
	13-24 months	5	32	33
	25-36 months	0	0	13
	> 36 months	0	0	20
	Don't know	24	0	17
Rural	0-6 months	67	33	20
	7-12 months	33	17	0
	13-24 months	0	8	40
	25-36 months	0	17	0
	> 36 months	0	0	20
	Don't know	0	25	20
Combined	0-6 months	45	49	19
	7-12 months	14	6	4
	13-24 months	11	28	30
	25-36 months	0	6	11
	> 36 months	2	0	24
	don't know	29	10	12

Table 18. Reason for seeking dental care; percentage distribution of children by reason for seeking care at last visit

		Age 6	Age 9	Age 12
Urban	Check up	1	3	5
	Toothache	31	27	24
	Tooth decay	7	10	14
	Gum problem	0	0	0
	Tooth extraction	3	25	18
	Other	3	2	3
Periurban	Check up	0	3	6
	Toothache	15	12	13
	Tooth decay	2	7	8
	Gum problem	0	0	1
	Tooth extraction	6	14	26
	Other	1	0	2
Rural	Check up	0	0	0
	Toothache	2	13	4
	Tooth decay	0	3	5
	Gum problem	0	3	0
	Tooth extraction	2	13	9
	Other	2	0	0
Combined	Check up	0	3	5
	Toothache	19	18	16
	Tooth decay	3	7	10
	Gum problem	0	1	1
	Tooth extraction	4	18	20
	Other	2	1	2

Table 19. Dental care provider at last visit; percentage distribution of children by category of provider

		Age 6	Age 9	Age 12
Urban	Rural doctor	21	8	10
	Private dentist	0	17	15
	Stomatologist	63	67	67
	Other	16	8	8
Periurban	Rural doctor	17	20	18
	Private dentist	4	0	3
	Stomatologist	57	75	65
	Other	22	5	14
Rural	Rural doctor	33	42	70
	Private dentist	0	0	0
	Stomatologist	33	42	20
	Other	34	16	10
Combined	Rural doctor	20	17	17
	Private dentist	2	9	8
	Stomatologist	59	65	64
	Other	19	9	11

Table 20. Responsibility for dental care; percentage distribution of children by person responsible for arranging dental care

		Age 6	Age 9	Age 12
Urban	Parent	95	92	93
	Teacher	0	0	5
	Other	5	8	2
Periurban	Parent	92	95	87
	Teacher	8	5	6
	Other	0	0	7
Rural	Parent	67	92	100
	Teacher	0	0	0
	Other	33	8	0
Combined	Parent	92	93	91
	Teacher	3	1	5
	Other	5	6	4

Table 21. Plaque Index; percentage distribution of children by Plaque Index score (anterior teeth)

		Plaque Index					
		0	1	2	3	9	Total
Age 6	Urban	19	31	36	2	12	100
	Periurban	16	15	61	2	6	100
	Rural	2	11	76	0	11	100
	Combined	15	20	54	2	9	100
Age 9	Urban	17	28	53	2	0	100
	Periurban	29	10	56	3	2	100
	Rural	12	18	58	12	0	100
	Combined	20	19	55	5	1	100
Age 12	Urban	40	24	35	1	0	100
	Periurban	32	23	43	2	0	100
	Rural	29	23	48	0	0	100
	Combined	35	23	41	1	0	100

Table 22. Plaque Index; percentage distribution of children by Plaque Index score (posterior teeth)

		Plaque Index					
		0	1	2	3	9	Total
Age 6	Urban	7	32	62	0	0	100
	Periurban	6	19	71	4	0	100
	Rural	9	22	67	2	0	100
	Combined	7	25	66	2	0	100
Age 9	Urban	13	45	42	0	0	100
	Periurban	3	24	71	2	0	100
	Rural	7	28	65	0	0	100
	Combined	8	33	58	1	0	100
Age 12	Urban	25	45	30	0	0	100
	Periurban	14	40	46	0	0	100
	Rural	12	36	50	2	0	100
	Combined	19	41	40	0	0	100

Table 23. Periodontal status; percentage distribution of children by CPITN code

		CPITN				
		0	1	2	X	Total
Age 6	Urban	14	32	3	51	100
	Periurban	3	48	9	40	100
	Rural	18	31	20	31	100
	Combined	10	39	9	42	100
Age 9	Urban	8	32	60	0	100
	Periurban	0	14	86	0	100
	Rural	7	13	80	0	100
	Combined	5	20	75	0	100
Age 12	Urban	1	6	93	0	100
	Periurban	1	5	94	0	100
	Rural	0	2	98	0	100
	Combined	1	5	94	0	100

Table 24. Periodontal status; mean number of sextants per child by CPITN code

		CPITN				
		0	1	2	X	Total
Age 6	Urban	0.9	0.8	0.0	4.3	6.0
	Periurban	0.6	1.6	0.1	3.7	6.0
	Rural	1.2	0.8	0.4	3.6	6.0
	Combined	0.8	1.1	0.1	3.9	5.9
Age 9	Urban	2.8	1.8	1.4	0.0	6.0
	Periurban	1.6	1.6	2.7	0.1	6.0
	Rural	2.4	1.0	2.5	0.1	6.0
	Combined	2.3	1.5	2.2	0.1	6.1
Age 12	Urban	1.7	1.2	3.1	0.0	6.0
	Periurban	1.4	1.2	3.4	0.0	6.0
	Rural	1.2	0.6	4.2	0.0	6.0
	Combined	1.5	1.1	3.4	0.0	6.0

Table 25. Periodontal treatment need; percentage distribution of children by CPITN treatment code

		Treatment code		
		0	1	2
Age 6	Urban	65	35	3
	Periurban	43	57	9
	Rural	49	51	20
	Combined	52	48	9
Age 9	Urban	8	92	60
	Periurban	0	100	86
	Rural	7	93	80
	Combined	5	95	75
Age 12	Urban	1	99	93
	Periurban	1	99	94
	Rural	0	100	98
	Combined	1	99	94

Table 26. Periodontal treatment need; mean number of sextants per child by CPITN treatment code

		Treatment code		
		0	1	2
Age 6	Urban	5.2	0.8	0.0
	Periurban	4.3	1.7	0.1
	Rural	4.8	1.2	0.4
	Combined	4.7	1.3	0.1
Age 9	Urban	2.8	3.2	1.4
	Periurban	1.7	3.3	2.7
	Rural	2.5	3.5	2.5
	Combined	2.3	3.3	2.2
Age 12	Urban	1.7	4.3	3.1
	Periurban	1.4	4.6	3.4
	Rural	1.2	4.8	4.2
	Combined	1.5	4.5	3.4

Table 27. Percentage distribution of children by number of decayed,missing, and filled PRIMARY TEETH (dmft)

		Number of dmft							
		0	1-2	3-4	5-8	9-12	13-16	17-20	Total*
Age 6	Urban	10	12	8	25	25	15	5	100
	Periurban	16	6	14	34	20	6	4	99
	Rural	20	6	18	22	22	11	0	100
	Combined	14	8	12	29	22	11	4	100
Age 9	Urban	8	27	23	32	10	0	0	100
	Periurban	7	31	22	32	8	0	0	100
	Rural	23	20	18	34	5	0	0	100
	Combined	11	27	21	33	8	0	0	100
Age 12	Urban	84	12	3	1	0	0	0	100
	Periurban	79	18	2	1	0	0	0	100
	Rural	77	18	4	0	2	0	0	101
	Combined	81	15	3	1	0	0	0	100

* May not total 100 due to rounding.

Table 28. Caries status of PRIMARY TEETH; mean number of dmft per child

		d	m	f	dmft	SD dmft
Age 6	Urban	7.8	0.0	0.0	7.8	5.4
	Periurban	6.6	0.0	0.0	6.6	4.7
	Rural	5.9	0.0	0.0	5.9	4.5
	Combined	6.9	0.0	0.0	6.9	4.9
Age 9	Urban	3.8	0.4	0.0	4.2	3.0
	Periurban	3.7	0.2	0.0	3.9	2.8
	Rural	3.0	0.7	0.0	3.7	3.0
	Combined	3.6	0.4	0.0	4.0	2.9
Age 12	Urban	0.3	0.0	0.0	0.3	0.8
	Periurban	0.4	0.0	0.0	0.4	0.9
	Rural	0.5	0.0	0.0	0.5	1.3
	Combined	0.4	0.0	0.0	0.4	1.0

Table 29. Percentage distribution of children by number of decayed, missing, and filled PERMANENT TEETH (DMFT)

		Number of DMFT						
		0	1	2	3	4	5+	Total
Age 6	Urban	100	0	0	0	0	0	100
	Periurban	97	2	1	0	0	0	100
	Rural	100	0	0	0	0	0	100
	Combined	99	1	0	0	0	0	100
Age 9	Urban	60	17	15	7	1	0	100
	Periurban	80	13	2	3	2	0	100
	Rural	87	8	3	2	0	0	100
	Combined	74	13	7	5	1	0	100
Age 12	Urban	44	18	19	9	5	5	100
	Periurban	61	16	11	8	1	3	100
	Rural	73	13	12	2	0	0	100
	Combined	55	16	15	8	3	3	100

Table 30. Caries status of PERMANENT TEETH; mean number of DMFT per child

		D	M	F	DMFT	SD DMFT
Age 6	Urban	0.0	0.0	0.0	0.0	0.0
	Periurban	0.0	0.0	0.0	0.0	0.2
	Rural	0.0	0.0	0.0	0.0	0.0
	Combined	0.0	0.0	0.0	0.0	0.1
Age 9	Urban	0.7	0.0	0.0	0.7	1.1
	Periurban	0.3	0.0	0.0	0.3	0.8
	Rural	0.2	0.0	0.0	0.2	0.6
	Combined	0.4	0.0	0.0	0.4	0.8
Age 12	Urban	1.1	0.0	0.2	1.3	1.7
	Periurban	0.9	0.0	0.0	0.9	1.6
	Rural	0.4	0.0	0.0	0.4	0.8
	Combined	0.9	0.0	0.1	1.0	1.4

Table 31. Dental caries treatment need for PRIMARY TEETH; percentage of children in need of treatment type.

		Preventive	1-surface filling	2-surface filling	>2-surface filling	Pulp care	Extraction
Age 6	Urban	2	60	65	1	64	51
	Periurban	7	51	47	0	58	43
	Rural	0	60	53	0	56	42
	Combined	4	56	55	0	60	46
Age 9	Urban	3	40	53	2	55	43
	Periurban	5	44	61	0	29	53
	Rural	0	35	48	0	40	38
	Combined	3	40	55	1	42	45

Table 32. Dental caries treatment need for PRIMARY TEETH; mean number of teeth per child in need of treatment type.

		Preventive	1-surface filling	2-surface filling	>2-surface filling	Pulp care	Extraction
Age 6	Urban	0.0	1.4	1.4	0.0	1.5	1.1
	Periurban	0.1	1.0	0.9	0.0	1.4	1.2
	Rural	0.0	1.2	0.8	0.0	1.2	0.8
	Combined	0.0	1.2	1.1	0.0	1.4	1.1
Age 9	Urban	0.1	0.5	1.0	0.0	0.8	0.8
	Periurban	0.1	0.6	1.1	0.0	0.4	1.0
	Rural	0.0	0.4	0.9	0.0	0.8	0.6
	Combined	0.0	0.5	1.0	0.0	0.7	0.8

Table 33. Dental caries treatment need for PERMANENT TEETH; percentage of children in need of treatment type.

		Preventive	1-surface filling	2-surface filling	>2-surface filling	Pulp care	Extraction
Age 6	Urban	1	0	0	0	0	1
	Periurban	1	3	0	0	0	0
	Rural	4	0	0	0	0	2
	Combined	2	1	0	0	0	1
Age 9	Urban	10	35	5	0	0	2
	Periurban	10	22	0	2	0	3
	Rural	15	10	0	0	0	3
	Combined	11	24	2	1	0	3
Age 12	Urban	11	45	5	2	5	22
	Periurban	18	31	4	1	1	13
	Rural	5	25	2	0	0	11
	Combined	13	36	4	1	3	17

Table 35. Dental fluorosis; percentage distribution of children according to the classification of Dean

		Dean classification*							
		0	1	2	3	4	5	Excluded	Total
Age 6	Urban	12	0	0	0	0	0	88	100
	Periurban	13	0	0	1	0	0	86	100
	Rural	4	0	0	0	0	0	96	100
	Combined	11	0	0	0	0	0	89	100
Age 9	Urban	75	23	0	0	0	0	2	100
	Periurban	80	13	2	0	0	0	5	100
	Rural	75	18	2	0	0	0	5	100
	Combined	77	18	1	0	0	0	4	100
Age 12	Urban	87	10	1	1	0	0	1	100
	Periurban	90	8	1	0	0	0	1	100
	Rural	89	9	0	2	0	0	0	100
	Combined	88	9	1	1	0	0	1	100

* 0 Normal
1 Questionable
2 Very mild
3 Mild
4 Moderate
5 Severe

Table 36. Tetracycline stain; percentage of children having PERMANENT TEETH affected

Age 6	Urban	2
	Periurban	0
	Rural	0
	Combined	1
Age 9	Urban	27
	Periurban	12
	Rural	5
	Combined	16
Age 12	Urban	59
	Periurban	56
	Rural	16
	Combined	51

Table 37. Age and sex distribution of teachers

Age	Male	Female	Total
< 19	7	6	13
20 - 29	64	32	96
30 - 39	14	34	48
40 - 49	10	44	54
> 50	10	10	20
Total	105	126	231

Table 38. Oral health problems of school children as perceived by teachers; percentage distribution (n=190)

Dental caries	72
Irregularity of teeth	6
Ulcer	1
Other	6
Don't know	15
Total	100

Table 37. Age and sex distribution of teachers

Age	Male	Female	Total
< 19	7	6	13
20 - 29	64	32	96
30 - 39	14	34	48
40 - 49	10	44	54
> 50	10	10	20
Total	105	126	231

Table 38. Oral health problems of school children as perceived by teachers; percentage distribution (n=190)

Dental caries	72
Irregularity of teeth	6
Ulcer	1
Other	6
Don't know	15
Total	100

Table 39. Main cause of oral health problems of school children as perceived by teachers; percentage distribution (n=184)

Inadequate oral hygiene	54
Insufficient oral health knowledge	6
Eat too much sugar	15
Parents' ignorance of children's oral health	4
Other	8
Don't know	13
Total	100

Table 40. Teachers' oral health habits yesterday; percentage distribution (n=231)

Toothbrushing	97
Using toothpick	36
Flossing	3
Mouthrinsing	51

Table 41. Teachers' knowledge of role of fluoride in dental care; percentage distribution (n=226)

Know	25
Don't know	75
Total	100

Table 42. Teachers' knowledge of etiology of dental caries; percentage distribution (n=190)

Inadequate oral hygiene	32
Bacteria	56
Inadequate diet	1
Chinese explanation	1
Other	1
Don't know	9
Total	100

Table 43. Teachers' knowledge of etiology of gum disease; percentage distribution (n=156)

Inadequate oral hygiene	21
Bacteria	1
Inadequate diet	6
Calculus	11
Chinese explanation	13
Don't know	48
Total	100

Table 44. Teachers' assessment of their need for a course on oral health knowledge in preparation for teaching purposes; percentage distribution (n=216)

Enough	14
Not enough, short term course	67
Not enough, long term course	19
Total	100

Table 45. Teachers opinion of appropriate methods for teaching concepts of oral health; percentage distribution (n=231)

Talks	52
Slide shows	56
Video-tapes	60
Demonstrations	46
Games	39
Pamphlets	29
Other	3

Table 46. Dental service utilization; percentage distribution of teachers by time since last attending a dentist (n=222)

0-6 months	19
7-12 months	7
13-24 months	9
25-36 months	5
> 36 months	10
Never	40
Don't know	10
Total	100

Table 47. Reason for seeking dental care; percentage distribution* of teachers (n=231)

No complaint - check up	2
Toothache	28
Broken tooth	29
Gum problem	5
To get false teeth or have them adjusted	7
Tooth extraction	10
Other	5

* Do not total 100 owing to multiple choices.

Table 48. Reasons for never visiting a dentist; percentage distribution* of teachers (n=231)

No dental problem	31
Afraid of the pain	1
Afraid of the dentist	0
Too expensive	3
Too far to go	0
Not enough time	4
A dentist cannot cope with my dental problems	2
Other	1

* Do not total 100 owing to multiple choices.

DISCUSSION

The high proportion of children claiming to have brushed their teeth everyday is illustrative of the general importance the community attaches to the desirability of enhancing hygiene, and in particular, oral hygiene. According to the questionnaire results, between-meal snacking would appear to be a rare occurrence among children in Conghua County. It was, however, our observation that the school snack shops were well patronised during school breaks. Also, we frequently observed small children in the villages to be eating candy.

The children were generally aware of their own caries status. The urban and periurban children were also aware of the cause of caries, although this was not the case for the rural children. Traditional beliefs and use of herbal remedies relating to dental problems in children appeared to be not evident in Conghua.

Gum bleeding was a well recognised phenomenon, but there was a lack of knowledge regarding its cause. Although it was dealt with by simple rinsing (presumably bleeding did not persist following rinsing), these responses point towards a consensus that this sign is perceived to be of little oral health-related significance.

The responses of the children to the questions concerned with dental service utilization indicated that dental care was sought for the purpose of relieving symptoms of dental caries only, rather than for a combination of treatment, preventive, and checking purposes.

Despite the claims by the children regarding their toothbrushing practices, the general standard of oral hygiene was poor. Almost all children had visible plaque on anterior and posterior teeth, indicating that efforts to improve this situation are needed. Similarly, the need to implement a program of scaling is indicated, although the priority given to improving toothbrushing should be given precedence.

In primary teeth, dental caries prevalence was almost universal and severe in its manifestation as indicated by the fact that 45% and 33% of 6 year-old urban and rural children respectively had 9-20 dmft.

On the other hand, the caries situation of permanent teeth was noticeably less severe, and the problem which existed was, on the whole, accounted for by the caries susceptibility of the first molars.

Owing to the serious caries problem affecting the primary teeth, there is a consequent heavy need for preventive care. The need for restorative care for primary teeth is clearly evident. However, the extent to which this need can be met should be determined when policy concerning the development of the dental

care program is worked out. Priority, in the first instance, should be given to establishing resources for the treatment of permanent teeth. In this regard there is a need to develop a service capable of delivering simple restorative procedures which would save teeth otherwise lost through unchecked caries progression. In addition to saving maxillary incisors through the early intervention with restorative care, the loss of molars can be prevented by use of fissure sealants.

The better dental status of rural children compared with urban children is most likely due to the relative affluence of the urban children and associated availability of cariogenic snack food. It should be noted that compared with other counties in Guangdong Province, the rural areas of Conghua are less well developed and financial hardship among the villagers is evident.

The prevalence of fluorosis among those surveyed was negligible. It is interesting that the prevalence did not vary by area, because it has been reported that the rural town where we conducted the survey was located in a region noted for the prevalence of severe fluorosis. The use of tetracyclines in China is widespread although it is apparently not readily available in rural areas. Owing to its long shelf life and low manufacturing costs, tooth staining from tretracycline will be prevalent in the foreseeable future. However, the recent marked decline in the prevalence of tetracycline staining has, presumably, came about due to a change in prescribing policy in response to concerns with this unsightly side effect.

The teachers were of the opinion that inadequate oral hygiene was the root cause of the oral diseases of the children, yet this was not supported by a strong background knowledge of the specific etiological factors of both dental caries and periodontal disease.

The fact that 40% of the teachers had never felt a need to attend a dentist, is an indication that tooth loss among adults in Counghua County arising from both dental caries and periodontal disease is minimal. These diseases, though prevalent, are probably minimally progressive. However, it is noted that in relation to dental caries experience, it is most usually the case that a great variability between subjects exists.

RECOMMENDATIONS

The principal city, Jiekouzhen, of Conghua County is presently undergoing a rapid expansion. Hand in hand with the commercial development is the establishment of multistorey apartment blocks and related installation of water supplies and modern sanitation facilities. This development will, hopefully, reach the periurban areas in the foreseeable future. However, it is likely to be sometime yet before the program of modernization will have a significant impact upon the rural villages in Conghua where, with few exceptions, housing, water supplies, and sanitation remain inadequate.

Since the World Health Organization has established a Collaborating Centre for Primary Health Care in Conghua, the future development of dental services for school children should reflect the philosophy underlying the concepts expressed in the Primary Health Care Approach.

Implementation of the following recommendations should bring about the prevention of most of the oral health problems identified in this survey and reduce disease morbidity to a level which is readily manageable.

1. Water fluoridation should be implemented in cities and large towns. An alternative program for fluoride delivery should be implemented in areas where fluoridation is not feasible.

2. Daily toothbrushing using fluoridated toothpaste should be established as a school based activity.

3. A program for conducting annual dental examinations of school children should be implemented with a view to screening and implementing:
   (a) Periodontal therapy
   (b) Specific caries preventive measures, such as fissure sealant placement, and
   (c) Treatment of active caries affecting permanent teeth.

4. A treatment referral program for children with pain or abscesses arising from carious primary teeth should be established in schools.

5. The program of health education within the school curriculum should be developed to include the causes and prevention of oral diseases.

6. Community-based health education programs should also be developed to include the causes and prevention of oral diseases.

The establishment of school-based toothbrushing should be given a high priority in all areas. This is particularly relevant in periurban and rural areas where home bathroom facilities are inadequate for this propose.

The annual dental examinations and sealant placement should be conducted by personnel designated as lower-level primary health care workers, such as nurses. Children identified as needing treatment for periodontal disease and caries should be referred by the nurses to mid-level dental personnel for follow up. The teachers should refer children with dental pain to community based nurses for treatment, or for referral where appropriate to mid-level dental personnel.

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世界卫生组织口腔卫生调查表（1986）

WHO ORAL HEALTH ASSESSMENT FORM (1986)

（简化）(SIMPLIFIED)

国家 _____

留空	年	月 日	识别号码	原检/复检	检查员
(1)(4)	(5)(6)		(7)(10)	(11)	(12)

一般资料

姓名 _____

年岁 (13)(14)

性别（男 = 1，女 = 2） (15)

族类 (16)

职业 (17)

检查地点 (18)(19)

地区类别 1 = 城市 2 = 城郊 3 = 农村 (20)

其他资料（需要注明）

_____ (21)

_____ (22)

_____ (23)

错 牙合

0 = 没有 (24)

1 = 轻微

2 = 中度或严重

牙周状况（CPITN 群体牙周疾病治疗需要指标）

17/16 11 26/27

(25) (27)

(28) (30)

47/46 31 36/37

0 = 健康

1 = 牙龈出血

2 = 牙结石

3 = 牙周袋 4 - 5 毫米（可局部看到探针黑带）

4 = 牙周袋 > 6 毫米（不见探针黑带）

X = 除外区段

牙列情况及治疗需要

	状况	治疗
恒牙	0 = 健康 1 = 龋齿 2 = 充填+龋齿 3 = 充填、无龋 4 = 因龋而缺失 5 = 其他原因所致缺失 6 = 牙沟封闭剂、外涂剂 7 = 桥基或特别牙冠 8 = 未出牙 9 = 除外牙	0 = 不需要 1 = 阻止龋或封闭治疗 2 = 单面充填 3 = 双面或多面充填 4 = 牙冠或桥基 5 = 桥体 6 = 牙髓治疗 7 = 拔除 8 = 其他治疗 9 = 特别注明 _____
乳牙	A B C D E - F G - -	

55 54 53 52 51 61 62 63 64 65

18 17 16 15 14 13 12 11 21 22 23 24 25 26 27 28

状况 (31) (46)

(47) (62)

治疗

85 84 83 82 81 71 72 73 74 75

48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38

状况 (63) (78)

(79) (94)

治疗

氟斑牙

(95)

0 = 正常

1 = 可疑

2 = 极轻度

3 = 轻度

4 = 中度

5 = 重度

WHO/5434/ORH/86.6/000008

Translated by the Department of Periodontology and Public Health.

香港大学牙医学院齿骨膜病及公共卫生学系译

被訪者編號

				1-4

第一部份　個人資料

一、學校 _____

二、班別 _____

三、地區：

☐ (1)縣城 _____ 5

☐ (2)平原

☐ (3)山區

四、姓名 _____

五、性別 _____ 6

☐ (1)男

☐ (2)女

六、年齡 _____ 7

☐ (1) 6 歲

☐ (2) 9 歲

☐ (3) 12 歲

第二部份　口腔衛生習慣

七、你有沒有每天刷牙？ _____ 8

☐ (1)有

☐ (2)沒有，爲什麼 _____

（若沒有，轉問第八題）

七(甲) 若有，你每天刷多少次？ _____ 9

☐ (1)一次

☐ (2)兩次

☐ (3)兩次以上

七(乙) 你什麼時候刷？

☐ (1)早上 _____ 10

☐ (2)晚上

☐ (3)飯後

☐ (4)早上及晚上

☐ (5)其他 _____

七(丙) 你刷牙時有沒有用牙膏？

☐ (1)有 _____ 11

☐ (2)沒有

七(丁) 誰教你刷牙？

☐ (1)父母 _____ 12

☐ (2)老師

☐ (3)其他，請註明 _____

八、你吃東西後有沒有漱口？

☐ (1)有 _____ 13

☐ (2)沒有

第三部份　飲食習慣

九、昨天三餐正餐以外，你吃多少次甜東西（或飲多少次甜飲品）？ _____ 14

- ☐ (1)沒有吃或飲
- ☐ (2)一次
- ☐ (3)兩次
- ☐ (4)三次
- ☐ (5)三次以上

第四部份　口腔衛生情況及常識

十、你曾否有蛀（爛）牙？

- ☐ (1)有 _____ 15
- ☐ (2)沒有（請轉問第十乙題）

十(甲)、你有爛牙時，你曾經怎樣做？ _____ 16

- ☐ (1)沒有理會
- ☐ (2)飲涼茶
- ☐ (3)看牙醫
- ☐ (4)自己吃藥
- ☐ (5)其他，請註明 _____

十(乙) 你認爲什麼會引起蛀（爛）牙？

（可選多項）

- ☐ (1)吃糖 ＿＿＿＿ 17
- ☐ (2)牙齒不清潔 ＿＿＿＿ 18
- ☐ (3)細菌 ＿＿＿＿ 19
- ☐ (4)牙蟲 ＿＿＿＿ 20
- ☐ (5)其它，請註明 ＿＿＿＿＿＿ ＿＿＿＿ 21
- ☐ (9)不知道 ＿＿＿＿ 22

十一、你曾否流過牙血？

- ☐ (1)有 ＿＿＿＿ 23
- ☐ (2)沒有（請轉問第十一(乙)題）

十一(甲)你流牙血時，你曾經怎樣做？ ＿＿＿＿ 24

- ☐ (1)沒有理會
- ☐ (2)飲涼茶
- ☐ (3)看牙醫
- ☐ (4)自己吃藥
- ☐ (5)其他，請註明 ＿＿＿＿＿＿

十一(乙)你認爲什麼會引起牙肉流血？

（可選多項）

- ☐ (1)牙齒不清潔 ＿＿＿＿ 25
- ☐ (2)牙石 ＿＿＿＿ 26
- ☐ (3)細菌 ＿＿＿＿ 27
- ☐ (4)熱氣 ＿＿＿＿ 28
- ☐ (5)其他，請註明 ＿＿＿＿＿＿ ＿＿＿＿ 29
- ☐ (9)不知道 ＿＿＿＿ 30

第五部份　過往使用口腔科服務的情況

十二、你曾否看過牙醫？ _____ 31

☐ (1)有

☐ (2)從沒有（訪問完畢，多謝合作）

十二(甲)你最近一次看牙醫是多久以前？

_____年_____月 _____ 32-33

十二(乙)你最近爲什麼去看牙醫？（可選多項）

☐ (1)例行檢查 _____ 34

☐ (2)牙痛 _____ 35

☐ (3)爛牙 _____ 36

☐ (4)牙肉問題 _____ 37

☐ (5)剝牙 _____ 38

☐ (6)其他，請註明 _____ _____ 39

十二(丙)你去那裏看牙醫？

☐ (1)鄉村醫生 _____ 40

☐ (2)個體戶的口腔科醫生

☐ (3)人民醫院的口腔科醫生

☐ (4)其他，請註明 _____

十二(丁)誰帶你去看牙醫？

☐ (1)父母 _____ 41

☐ (2)教師

☐ (3)其他，請註明 _____

〔訪問完畢，多謝合作〕

CHILDREN'S QUESTIONNAIRE, CONGHUA SURVEY 1988

PART I. PERSONAL DATA

1. School : _____

2. Class : _____

3. Area : ___ (1) County town (urban)
___ (2) Plain (periurban)
___ (3) Mountains (rural)

4. Name : _____

5. Sex : ___ (1) Male
___ (2) Female

6. Age : ___ (1) aged 6
___ (2) aged 9
___ (3) aged 12

PART II. ORAL HYGIENE HABIT

7. Do you brush your teeth daily?
___ (1) Yes
___ (2) No, why: _____
(If no, go to Q.8)

7a. If yes, how many times do you brush your teeth every day?
___ (1) once
___ (2) twice
___ (3) more than twice

7b. When do you brush your teeth?
___ (1) morning
___ (2) evening
___ (3) after meals
___ (4) morning and evening
___ (5) other : _____

7c. Do you use toothpaste when you brush?
___ (1) Yes
___ (2) No

7d. Who taught you how to brush your teeth?
___ (1) parents
___ (2) teacher
___ (3) other, please specify: _____

8. Do you rinse your mouth after eating?
___ (1) Yes
___ (2) No

PART III. DIET HABITS

9. How many times did you take sweet snacks between meals yesterday? (or sweet drinks)
   ___ (1) nil
   ___ (2) once
   ___ (3) twice
   ___ (4) 3 times
   ___ (5) more than 3 times

PART IV. ORAL HEALTH STATUS AND KNOWLEDGE

10. Have you had a decayed tooth?
   ___ (1) Yes
   ___ (2) No (go to Q.10b)

10a. What did you do when you had a decayed tooth?
   ___ (1) ignore it
   ___ (2) drink cooling tea
   ___ (3) visit a dentist
   ___ (4) take some medicine myself
   ___ (5) other, please specify: _____

10b. What causes tooth decay? (can choose more than one answer)
   ___ (1) sugar
   ___ (2) inadequate oral hygiene
   ___ (3) bacteria
   ___ (4) tooth worm
   ___ (5) other, please specify: _____
   ___ (6) don't know

11. Have you had bleeding gums?
   ___ (1) Yes
   ___ (2) No (go to Q.11b)

11a. What did you do when your gums bled?
   ___ (1) ignore it
   ___ (2) drink cooling tea
   ___ (3) visit a dentist
   ___ (4) take some medicine myself
   ___ (5) other, please specify: _____

11b. What causes gum bleeding?
   ___ (1) poor oral hygiene
   ___ (2) calculus
   ___ (3) bacteria
   ___ (4) hot air
   ___ (5) other, please specify: _____
   ___ (6) don't know

PART V. ORAL HEALTH CARE SERVICES UTILIZATION

12. Have you visited a dentist?
___ (1) Yes
___ (2) No (interview ends, thank you)

12a. When was your last dental visit?
_____ years and _____ months ago

12b. Why did you visit the dentist last time?
(can have more than one answer)
___ (1) check-up
___ (2) toothache
___ (3) tooth decay
___ (4) gum problems
___ (5) tooth extraction
___ (6) other, please specify: _____

12c. Who did you visit last time?
___ (1) rural doctor
___ (2) private stomatologist
___ (3) stomatologist at the People's Hospital
___ (4) other, please specify: _____

12c. Who brought you there?
___ (1) parents
___ (2) teacher
___ (3) other, please specify: _____

INTERVIEW ENDS, THANK YOU

被訪者編號

				1-4

第一部份　個人資料

一、學校：

二、性別：

☐ (1) 男

☐ (2) 女

_____ 5

三、年齡：_____ 歲

_____ 6-7

第二部份　對從化縣青少年口腔衛生現狀的意見

四、你覺得從化縣青少年（學童）口腔或牙齒方面有什麼問題？

_____ 8

_____

_____

五、你認爲上述問題的成因是什麼？

_____ 9

_____

_____

第三部份　口腔衛生習慣

六、昨天你怎樣清潔牙齒？ _____ 10

- ☐ (1)刷牙
- ☐ (2)用牙簽撩牙
- ☐ (3)用牙線清潔牙縫
- ☐ (4)漱口
- ☐ (5)其他，請註明 _____

第四部份　口腔衛生常識

七、你知道什麼是「氟」素嗎？ _____ 11

- ☐ (1)知，有什麼用途 _____
- ☐ (2)不知

八、你認爲什麼會引起蛀牙？ _____ 12

_____

_____

九、你認爲什麼會引起牙周病？ _____ 13

_____

_____

十、你認爲你對口腔疾病、其成因及預防等方面的知識是否足夠去教導學童？ _____ 14

☐ (1)足夠

☐ (2)不足夠，我需要短期課程

請註明 _____

☐ (3)不足夠，我需要長期課程

請註明 _____

十一、作爲一位老師，你認爲應該用那些方式去教導學童，使他們能認識口腔衞生的重要性？（可選多項）

☐ 講座 _____ 15

☐ 幻燈片介紹 _____ 16

☐ 錄像帶 _____ 17

☐ 示範 _____ 18

☐ 遊戲，例如歌唱比賽、話劇 _____ 19

☐ 小册子 _____ 20

☐ 其他，請註明 _____ 21

第五部份　使用牙科服務情況

十二、你最近在什麼時候看牙醫？ _____ 22-23

☐ (1)從未看過牙醫（請轉答第十四題）

☐ (2) _____年_____月

十三、你最近爲什麼看牙醫？（可選多項）

☐ 沒有特別原因，只是例行檢查 _____ 24

☐ 牙痛 _____ 25

☐ 崩牙或爛牙 _____ 26

☐ 牙肉問題 _____ 27

☐ 配假牙 _____ 28

☐ 脫牙 _____ 29

☐ 其他，請註明 _____ _____ 30

十四、如果你從未看過牙醫，是什麼原因？

（可選多項）

☐ 我的牙齒沒有問題 _____ 31

☐ 我怕痛 _____ 32

☐ 我怕牙醫 _____ 33

☐ 太貴 _____ 34

☐ 太遠 _____ 35

☐ 沒有時間 _____ 36

☐ 牙醫不可幫我解決問題 _____ 37

☐ 其他，請註明 _____ _____ 38

～ 完 ～

TEACHERS' QUESTIONNAIRE, CONGHUA SURVEY 1988

PART I. PERSONAL DATA

1. School : _____

2. Sex : ___ (1) Male
   ___ (2) Female

3. Age : _____ years

PART II. OPINIONS ON THE ORAL HEALTH OF CONGHUA CHILDREN

4. What are the oral or dental health problems of the Conghua children?

_____

5. What are the causes of the above-mentioned problems?

_____

PART III. ORAL HYGIENE HABIT

6. How did you clean your teeth yesterday?
   ___ (1) tooth-brushing
   ___ (2) use a tooth-pick
   ___ (3) use a dental floss
   ___ (4) mouth-rinsing
   ___ (5) other, please specify: _____

PART IV. ORAL HEALTH KNOWLEDGE

7. Do you know what is fluoride?
   ___ (1) Yes
   ___ (2) No

8. What causes tooth decay?

_____

9. What causes periodontal disease?

_____

10. Do you think you have adequate knowledge on oral diseases, their causes, and prevention to teach your students?
___ (1) Yes
___ (2) No, I need a short course on _____
___ (3) No, I need a long course on _____

11. As a teacher, which method do you think should be used to teach the students about the importance of oral health? (can choose more than one method)
___ (1) talks
___ (2) slide shows
___ (3) video-tapes
___ (4) demonstrations
___ (5) games, e.g. singing competition, drama
___ (6) pamphlets
___ (7) other, please specify: _____

PART V. ORAL HEALTH CARE SERVICES UTILIZATION

12. When did you last visit a dentist?
___ (1) I have never visited a dentist (go to Q.14)
___ (2) year_____ month _____

13. Why did you visit a dentist last time? (can give more than one answer)
___ (1) no specific reason, just for a check-up
___ (2) toothache
___ (3) broken tooth or tooth decay
___ (4) gum problems
___ (5) to get false teeth or have them adjusted
___ (6) tooth extraction
___ (7) other, please specify: _____

14. If you have never visited a dentist, what is the reason?
___ (1) I have no dental problems
___ (2) I am afraid of the pain
___ (3) I am afraid of the dentist
___ (4) too expensive
___ (5) too far to go
___ (6) no time to go
___ (7) a dentist cannot cope with my dental problem
___ (8) other, please specify: _____

- END -